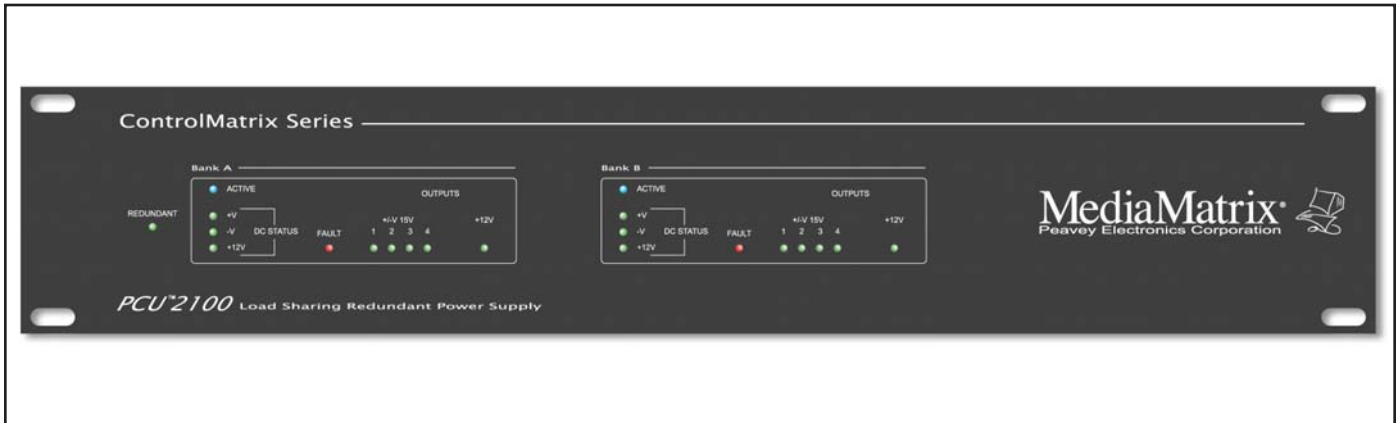


ControlMatrix Series

MediaMatrix®



PCU 2100 Redundant Load Sharing Power Supply



Description

The PCU-2100 Load Sharing Redundant Power Supply is a 2U rack-mounted power supply system for Control Matrix field paging components. The PCU-2100 is designed to provide redundant or passive operation from its two independent power supply modules, or "banks". Each bank is capable of simultaneously powering up to eight Control Matrix PCU Series stations and ten remote control panels. Each bank is an fully independent power supply, internally protected against load faults. Additional protection is provided for each output circuit and an auto-reset feature makes restoring power to protected output loads easy, without assistance from technical personnel. Front panel LED indicators alert the user to load status, as well as the health of incoming primary supply voltages and fault conditions. The PCU 2100 can operate in either Redundant or Dual modes. A rear panel switch allows the system integrator to determine the operating mode, while a front panel LED provides visual status for the user. When operating in Redundant Mode, the PCU-2100 provides fully supervised, redundant power

supply outputs for up to eight PCU Series paging stations and up to ten remote control panels. In this mode, any failure of a primary supply module will automatically engage the second supply module, without interruption. In Dual Mode, the second bank can be fully loaded, thereby doubling the capacity of the PCU 2100 for applications that do not require redundancy. Each bank includes a Form-C, fault output connector for interfacing external alarms or signalling equipment. A front panel Fault LED provides visual status to the user. Additional connectivity is provided for terminating the data lines from ControlMatrix devices. Each bank includes a wiring bus that allows for easy interface to head end equipment. The PCU-2100 is designed for the systems contractor and features rear panel connections for all supply circuits. Removable Euro connector provide easy termination and service for all outputs and fault contacts. A removable IEC line connector is provided for the AC line. The PCU 2100 is available for domestic (120VAC) and export (230/240VAC) use.

Features

- Industrial Rack Mount Package
- Redundant Operation
- Support for up to 16 paging stations
- Support for up to 20 control panels
- LED status indicators
- Integrated Fault Supervision
- Form C Fault Relay Contacts
- Removable Euro Connectors
- Bi-polar & Single-Ended supplies
- RS-485 Termination Bus

Applications

- Transportation terminals
- Institutional paging
- Manufacturing environments
- Warehouse facilities
- Educational facilities
- Convention centers
- Campus facilities
- Municipal infrastructure
- Communications
- Theatre

Specifications

Input Requirements

1A @ 120VAC
0.5A @ 230VAC

Bank Outputs (max each bank)

Bi-polar, four groups, two connectors per group, +15VDC, 0.65mA per group; -15VDC, 0.3A per group, referenced to ground.

Single-ended, all outputs combined, +12VDC, 0.5A, referenced to ground.

Connections

3-position removable Euro block for each bi-polar circuit, RS-485 output and fault contact.

2-position removable Euro block for each single-ended circuit and RS-485 inputs.

IEC power connector.

Front Panel Status

Status (AC Mains): 1x blue, single-color.
+V, -V, +12V (DC): 3x green, single-color.

Fault: 1x red, single-color.
Outputs 1-4: 4x green/red, dual-color.
Output +12V: 1x green/red, dual-color.

Power Supply

Bi-polar max power: 1.85A (+V), 0.75A (-V) quasi-regulated, 8 loads distributed across 4 circuits.

Single-ended max power: 12VDC, 0.5A fully regulated, 10 loads max across single output.

Mechanical

Dimensions: 19"W X 3.5"H X 16.5"D

Weight: 16.8 Lbs unit weight
22.4 Lbs shipping weight

Construction: 18 gauge powder-coated CRS.

Supplied Accessories: IEC power cable, 3-position Euro connectors, 2-position Euro connectors.

Architect's & Engineer's Specifications

Power Supply

The power supply shall be constructed in a steel, powder-coated chassis, suitable for installation in EIA equipment racks. The unit shall not exceed 2 EIA rack spaces, and shall include rear panel terminations exclusively. The power supply shall be designed for either stand-alone or redundant operation, and shall be based on a dual-supply architecture. Each supply bank shall supply bi-polar DC power for up to 8 paging stations in redundant mode, or up to 16 stations in stand-alone mode. An additional single-ended DC supply for each bank shall provide power for up to 10 remote control panels in redundant mode, or 20 panels in stand-alone mode. Each output circuit, for each bank, shall include an auto-resetting device that will protect the load and the power supply output in the case of a load fault. When the fault is corrected, the output circuit shall either automatically reset or require line voltage cycling, depending on the type of fault. When operating in redundant mode, the supply shall operate with each bank in parallel, providing 1:1 redundancy for fail-safe operation. If a primary power supply output circuit fails, the secondary supply bank shall provide power to the load without interruption. Each bank shall include a fault contact supervision relay with external contacts. The relay contacts shall be rated for 500mA minimum, and shall provide N.O. and N.C. contacts (Form C). A corresponding front panel LED shall be included for each bank to indicate fault status. The power supply shall include front panel LED status indicators that provide visual status of all power supply circuits. These include, but are not limited to primary power (mains). Additional LEDs shall be provided for the main supply and load circuit status for each group of supply outputs. This includes bi-polar power with LEDs for each group and single-ended power for both banks. The power supply shall be the MediaMatrix PCU 2100.

